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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,128	03/05/2002	Nicolas Godbout	520-USA	3583
26031	7590	10/07/2003	EXAMINER	
GEORGE J. PRIMAK 13480 HUNTINGTON PIERREFONDS, QC H8Z 1G2 CANADA			KIM, ELLEN E	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/090,128	GODBOUT ET AL.	
	Examiner	Art Unit	
	Ellen E Kim	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-15, 24, 25 and 27 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 16-23 and 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3/5/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 11-15, 24-25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al [Applicant's submitted prior art, USPAT 5,295,205] in view of Pleibel et al [USPAT 4,274,854].

Miller et al disclose a Mach-Zehnder device comprising achromatic first and second coupling regions [see column 10, lines 12-24], and an intermediate region with a phase shifting region.

Miller et al discloses every aspect of claimed invention except for the different level of birefringence. Miller et al, however, show at column 5, lines 37-49 that there should be some difference in the phase shifting portion.

Pleibel et al disclose a polarization-preserving optical fiber [stress-induced birefringence in the fiber, see abstract].

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Miller et al's device to include the polarization- preserving optical fiber as shown in Pleibel et al's reference for the purpose of resisting to the polarization-mixing effects of handling, simple to fabricate and of consistent quality [column 1, lines 24-27].

In re claim 4, it is clear that the phase shifting portion level of birefringence could be higher or lower.

In re claims 7 and 13, the claimed method of forming the device is not germane to the issue of patentability of the device itself. Therefore this limitation has not given any patentable weight.

In re claim 8, the difference in diameter is shown in column 5, lines 42-46.

Allowable Subject Matter

Claims 9-10, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or suggest a Mach-Zehnder device comprising all the specific elements with the specific combination including a phase shifting portion fast polarization axis, and a polarization orienting means so that optical signal is linearly polarized and defines a signal

fast polarization axis substantially aligned with the phase shifting portion fast polarization axis as set forth in claims 9, 10, and 26.

Claims 16-23 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art does not disclose or suggest a method of forming a Mach-Zehnder device using a first and a second main fiber comprising all the specific elements with the specific combination including a method of step of splicing a phase shifting segment of relatively highly birefringent fiber in the first fiber intermediate segment between the coupling segments as set forth in claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (703) 308-4946. The examiner can normally be reached on Monday and Thursday.

Ellen E. Kim

Primary Examiner

September 25, 2003/EK

